## Alan C Brent

## List of Publications by Year in descending order

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136740 114278 4,622 150 32 63 h-index citations g-index papers 151 151 151 4259 citing authors docs citations times ranked all docs

#	Article	IF	CITATIONS
1	Country specific low carbon commitments versus equitable and practical company specific decarbonisation targets. Environment, Development and Sustainability, 2022, 24, 10005-10025.	2.7	4
2	Resilience-Oriented Planning of Multi-Carrier Microgrids under Cyber-Attacks. Sustainable Cities and Society, 2022, 79, 103709.	5.1	18
3	Demand response-integrated investment and operational planning of renewable and sustainable energy systems considering forecast uncertainties: A systematic review. Renewable and Sustainable Energy Reviews, 2022, 158, 112095.	8.2	46
4	Quantifying the effects of forecast uncertainty on the role of different battery technologies in grid-connected solar photovoltaic/wind/micro-hydro micro-grids: An optimal planning study. Journal of Energy Storage, 2022, 51, 104412.	3.9	16
5	Risk-based dispatch optimization of microgrids considering the uncertainty in EV driving patterns. , 2022, , .		O
6	Building capacity towards what? Proposing a framework for the analysis of energy transition governance in the context of urban informality in Sub-Saharan Africa. Local Environment, 2021, 26, 364-378.	1.1	10
7	Sustainable Microgrids for Remote Communities: A Practical Framework for Analyzing and Designing. , 2021, , 1-29.		O
8	Reviewing the impacts of community energy initiatives in New Zealand. Kotuitui: New Zealand Journal of Social Sciences Online, 2021, 16, 45-60.	0.7	1
9	Investigating the Investments Required to Transition New Zealand's Heavy-Duty Vehicles to Hydrogen. Energies, 2021, 14, 1646.	1.6	10
10	Lévy-flight moth-flame optimisation algorithm-based micro-grid equipment sizing: An integrated investment and operational planning approach. Energy and Al, 2021, 3, 100047.	5.8	21
11	Strategic design optimisation of multi-energy-storage-technology micro-grids considering a two-stage game-theoretic market for demand response aggregation. Applied Energy, 2021, 287, 116563.	5.1	36
12	Assessment of the Potential for Green Hydrogen Fuelling of Very Heavy Vehicles in New Zealand. Energies, 2021, 14, 2636.	1.6	9
13	Renewable Energy for Sustainable Development. Sustainability, 2021, 13, 6920.	1.6	8
14	A Strategic Management Framework for the Commercialization of Multitechnology Renewable Energy Systems: The Case of Concentrating Solar Power in South Africa. IEEE Transactions on Engineering Management, 2021, 68, 1690-1702.	2.4	3
15	Off-Grid Multi-Carrier Microgrid Design Optimisation: The Case of Rakiura–Stewart Island, Aotearoa–New Zealand. Energies, 2021, 14, 6522.	1.6	15
16	CONSIDERING MATERIAL CYCLES FOR A TRANSITION TO LOW-CARBON ENERGY SYSTEMS IN AOTEAROA/NEW ZEALAND: A SYSTEMATIC REVIEW. WIT Transactions on Ecology and the Environment, 2021, , .	0.0	0
17	Sustainable Microgrids for Remote Communities: A Practical Framework for Analyzing and Designing. , 2021, , 477-505.		0
18	Adding a Computationally-Tractable Probabilistic Dimension to Meta-Heuristic-Based Microgrid Sizing. , 2021, , .		1

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19	Economic viability assessment of sustainable hydrogen production, storage, and utilisation technologies integrated into on- and off-grid micro-grids: A performance comparison of different meta-heuristics. International Journal of Hydrogen Energy, 2020, 45, 34412-34436.	3.8	45
20	A comparison of metaheuristics for the optimal capacity planning of an isolated, battery-less, hydrogen-based micro-grid. Applied Energy, 2020, 259, 114224.	5.1	52
21	A hierarchical, market-based, non-cooperative game-theoretic approach to projecting flexible demand-side resources: Towards more realistic demand response-integrated, long-term energy planning models. , 2020, , .		8
22	Community Resilience-Oriented Optimal Micro-Grid Capacity Expansion Planning: The Case of Totarabank Eco-Village, New Zealand. Energies, 2020, 13, 3970.	1.6	15
23	Power Quality Considerations in the Planning Phase of Stand-Alone Wind-Powered Micro-Grids. , 2020, , .		1
24	Evaluating the Energy Potential of Solar PV Located on Mining Properties in the Northern Cape Province of South Africa. Sustainability, 2020, 12, 5857.	1.6	5
25	Solar Atlas of New Zealand from satellite imagery. Journal of the Royal Society of New Zealand, 2020, 50, 572-583.	1.0	6
26	Optimising the Concentrating Solar Power Potential in South Africa through an Improved GIS Analysis. Energies, 2020, 13, 3258.	1.6	6
27	Explore, Design and Act for Sustainability: A Participatory Planning Approach for Local Energy Sustainability. Sustainability, 2020, 12, 862.	1.6	12
28	Using a System Dynamics Modelling Process to Determine the Impact of eCar, eBus and eTruck Market Penetration on Carbon Emissions in South Africa. Energies, 2020, 13, 575.	1.6	7
29	Water and CSP—Linking CSP Water Demand Models and National Hydrology Data to Sustainably Manage CSP Development and Water Resources in Arid Regions. Sustainability, 2020, 12, 3373.	1.6	1
30	A Game-Theoretic Approach to Model Interruptible Loads: Application to Micro-Grid Planning. , 2020, , .		3
31	Towards Measuring the Informal City: A Societal Metabolism Approach. Journal of Industrial Ecology, 2019, 23, 674-685.	2.8	9
32	The need to strategically manage CSP fleet development and water resources: A structured review and way forward. Renewable Energy, 2019, 132, 813-825.	4.3	13
33	A Sustainable Energy Investment Planning Model Based on the Micro-Grid Concept Using Recent Metaheuristic Optimization Algorithms. , 2019, , .		10
34	Interrogating differences: A comparative analysis of Africa's informal settlements. World Development, 2019, 122, 614-627.	2.6	26
35	A demand response-centred approach to the long-term equipment capacity planning of grid-independent micro-grids optimized by the moth-flame optimization algorithm. Energy Conversion and Management, 2019, 200, 112105.	4.4	61
36	Water and CSP – A preliminary methodology for strategic water demand assessment. AIP Conference Proceedings, 2019, , .	0.3	2

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37	Mediating household energy transitions through co-design in urban Kenya, Uganda and South Africa. Energy Research and Social Science, 2019, 55, 208-217.	3.0	53
38	Research Insights and Knowledge Headways for Developing Remote, Off-Grid Microgrids in Developing Countries. Energies, 2019, 12, 2008.	1.6	24
39	Perpetuating energy poverty: Assessing roadmaps for universal energy access in unmet African electricity markets. Energy Research and Social Science, 2019, 55, 1-13.	3.0	31
40	Journey towards Renewable Energy for Sustainable Development at the Local Government Level: The Case of Hessequa Municipality in South Africa. Sustainability, 2019, 11, 755.	1.6	10
41	Sustainable energy transition framework for unmet electricity markets. Energy Policy, 2019, 129, 1090-1099.	4.2	41
42	Understanding electricity legitimacy dynamics in an urban informal settlement in South Africa: A Community Based System Dynamics approach. Energy for Sustainable Development, 2019, 49, 39-52.	2.0	33
43	Life cycle cost profitability of biomass power plants in South Africa within the international context. Renewable Energy, 2019, 139, 9-21.	4.3	11
44	Stochastic Optimal Sizing of Micro-Grids Using the Moth-Flame Optimization Algorithm. , 2019, , .		9
45	Evaluation of an integrated asset life-cycle management (ALCM) model and assessment of practices in the water utility sector. Water S A, 2019, 34, 285.	0.2	20
46	Biofuels technology development in Southern Africa. Development Southern Africa, 2019, 36, 155-174.	1.1	19
47	Proposing a master's programme on participatory integrated assessment of energy systems to promote energy access and energy efficiency in Southern Africa. International Journal of Sustainability in Higher Education, 2018, 19, 622-641.	1.6	2
48	A Strategic Management Framework for the Commercialization of Multi-Technology Renewable Energy Systems: The Case of Concentrating Solar Power Technologies in South Africa. , $2018, \ldots$		0
49	Defining nexus technology: the introduction of a conceptual model. , 2018, , .		0
50	Defining a remote village typology to improve the technical standard for off-grid electrification system design. , $2018, \ldots$		3
51	Optimal Sizing of an Islanded Micro-Grid Using Meta-Heuristic Optimization Algorithms Considering Demand-Side Management. , 2018, , .		10
52	Systems approach to concentrated solar power (CSP) technology adoption in South Africa. AIP Conference Proceedings, 2018, , .	0.3	4
53	Future CSP in South Africa $\hat{a}\in$ A review of generation mix models, their assumptions, methods, results and implications. AIP Conference Proceedings, 2018, , .	0.3	2
54	The Correlation between Energy Cost Share, Human, and Economic Development: Using Time Series Data from Australasia, Europe, North America, and the BRICS Nations. Energies, 2018, 11, 2405.	1.6	2

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55	Strategic Investment to Increase Access to Finance Among Mini-Grid ESCOs : Perspectives from sub-Saharan Africa. , $2018$ , , .		5
56	Improving the energy efficiency of the New Zealand economy: A policy comparison with other renewable-rich countries. Energy Policy, 2018, 122, 506-517.	4.2	15
57	Interaction patterns of systemic problems in distributed energy technology diffusion: a case study of photovoltaics in the Western Cape province of South Africa. Technology Analysis and Strategic Management, 2018, 30, 1422-1436.	2.0	5
58	Utilization of System Dynamics in Southern Africa: A Systematic Review. Systems Research and Behavioral Science, 2017, 34, 657-670.	0.9	6
59	Conceptualising slum in an urban African context. Cities, 2017, 62, 107-119.	2.7	47
60	System value and progress of CSP. Solar Energy, 2017, 152, 106-139.	2.9	79
61	Developing building typologies to examine energy efficiency in representative low cost buildings in Cape Town townships. Sustainable Cities and Society, 2017, 33, 1-17.	5.1	23
62	Infrastructure implications of a green economy transition in the Western Cape Province of South Africa: A system dynamics modelling approach. Development Southern Africa, 2017, 34, 529-547.	1.1	7
63	Implications of biofuel production in the Western Cape province, South Africa: A system dynamics modelling approach of South Africa: A system dynamics modelling approach. Journal of Energy in Southern Africa, 2017, 28, 1.	0.5	10
64	The impact of residential rooftop solar PV on municipal finances: An analysis of Stellenbosch. Journal of Energy in Southern Africa, 2017, 28, 29.	0.5	3
65	Analysing challenges facing smallholder farmers and conservation agriculture in South Africa: A system dynamics approach. South African Journal of Economic and Management Sciences, 2016, 19, 747-773.	0.4	54
66	CSP opportunity and challenges in a national system: The WWF renewable vision for a 2030 South African electricity mix. AIP Conference Proceedings, $2016$ , , .	0.3	3
67	Modelling and control synthesis of a micro-combined heat and power interface for a concentrating solar power system in off-grid rural power applications. AIP Conference Proceedings, 2016, , .	0.3	3
68	From enterprise development to inclusive innovation $\hat{a} \in A$ systemic instruments framework for regional innovation support. African Journal of Science, Technology, Innovation and Development, 2016, 8, 233-246.	0.8	8
69	Probing uncertainty levels of electrification in informal urban settlements: A case from South Africa. Habitat International, 2016, 56, 212-221.	2.3	35
70	Undertaking individual transdisciplinary PhD research for sustainable development. International Journal of Sustainability in Higher Education, 2016, 17, 150-166.	1.6	15
71	A systems approach to understanding the effect of Facebook use on the quality of interpersonal communication. Technology in Society, 2016, 44, 55-65.	4.8	14
72	A literature review on the potential of renewable electricity sources for mining operations in South Africa. Journal of Energy in Southern Africa, 2016, 27, 1-21.	0.5	20

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73	Guideline for energy management in the South African wine industry. Journal of Energy in Southern Africa, 2016, 27, 53.	0.5	3
74	Utility-scale PV power and energy supply outlook for South Africa in 2015. Renewable Energy, 2015, 83, 779-785.	4.3	29
75	Renewable energy gathers steam in South Africa. Renewable and Sustainable Energy Reviews, 2015, 41, 390-401.	8.2	95
76	Appropriate Curricula for Engineering Management Programmes: A South African Approach. Philosophy of Engineering and Technology, 2015, , 343-363.	0.1	1
77	Perceptions of professional practitioners and property developers relating to the costs of green buildings in South Africa. Journal of the South African Institution of Civil Engineering, 2015, 57, 12-19.	0.3	4
78	Concentrating solar power: Improving electricity cost and security of supply, and other economic benefits. Development Southern Africa, 2014, 31, 692-710.	1.1	5
79	Green economy transitioning of the South African power sector: A system dynamics analysis approach. Development Southern Africa, 2014, 31, 744-758.	1.1	12
80	Developing a competitive concentrating solar power industry in South Africa: Current gaps and recommended next steps. Development Southern Africa, 2014, 31, 475-493.	1.1	9
81	Modelling the transition towards a green economy in South Africa. Technological Forecasting and Social Change, 2014, 87, 257-273.	6.2	49
82	Engineering Education – A Systems Dynamics View. Incose International Symposium, 2014, 24, 382-397.	0.2	0
83	INVESTIGATING THE FINANCIAL CLOSE OF PROJECTS WITHIN THE SOUTH AFRICAN RENEWABLE ENERGY INDEPENDENT POWER PRODUCER PROCUREMENT PROGRAMME. South African Journal of Industrial Engineering, 2014, 25, .	0.2	3
84	Technology transfer of hand pumps in rural communities ofÂSwaziland: Towards sustainable project life cycle management. Technology in Society, 2013, 35, 258-266.	4.8	19
85	A comparison of solar aided power generation (SAPG) and stand-alone concentrating solar power (CSP): A South African case study. Applied Thermal Engineering, 2013, 61, 657-662.	3.0	76
86	A concentrating solar power value proposition for South Africa. Journal of Energy in Southern Africa, 2013, 24, 66-76.	0.5	12
87	TECHNOLOGY ASSESSMENT IN DEVELOPING COUNTRIES: SUSTAINABLE ENERGY SYSTEMS IN THE AFRICAN CONTEXT. International Journal of Innovation and Technology Management, 2012, 09, 1250035.	0.8	0
88	Application of a Multi-Criteria Analysis Approach for Decision-Making in the Energy Sector: The Case of Concentrating Solar Power in South Africa. Energy and Environment, 2012, 23, 1221-1231.	2.7	9
89	Assessing the sustainability of wastewater treatment technologies in the petrochemical industry. , 2012, , .		3
90	A system dynamics approach to technology sustainability assessment: The case of biodiesel developments in South Africa. Technovation, 2012, 32, 639-651.	4.2	42

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91	A model for evaluating the economic feasibility of small-scale biodiesel production systems for on-farm fuel usage. Renewable Energy, 2012, 39, 483-489.	4.3	11
92	Addressing the need for a clean development mechanism (CDM) specific project management strategy. South African Journal of Economic and Management Sciences, 2011, 12, 228-241.	0.4	1
93	Estimating the carbon emissions balance for South Africa. South African Journal of Economic and Management Sciences, 2011, 12, 263-279.	0.4	6
94	Technology sustainability assessment of biodiesel development in South Africa: A system dynamics approach. Energy, 2011, 36, 6922-6940.	4.5	32
95	Environmental life-cycle costing: a code of practice. International Journal of Life Cycle Assessment, 2011, 16, 389-391.	2.2	329
96	A conceptual framework for energy technology sustainability assessment. Energy for Sustainable Development, 2011, 15, 84-91.	2.0	77
97	Community perspectives on the introduction of biodiesel production in the Eastern Cape Province of South Africa. Energy, 2011, 36, 2502-2508.	4.5	44
98	Selection of renewable energy technologies for Africa: Eight case studies in Rwanda, Tanzania and Malawi. Renewable Energy, 2011, 36, 2845-2852.	4.3	79
99	Assessing the sustainability of energy technological systems in Southern Africa: A review and way forward. Technology in Society, 2011, 33, 145-155.	4.8	21
100	Industrial and commercial opportunities to utilise concentrating solar thermal systems in South Africa. Journal of Energy in Southern Africa, 2011, 22, 15-30.	0.5	8
101	Systems dynamics modelling to assess the sustainability of renewable energy technologies in developing countries. , $2011, \ldots$		4
102	Proposal of a Framework for the Selection of Renewable Energy Technology Systems in Africa. , 2011, , .		1
103	Corporate sustainability, ecological modernization and the policy process in the South African automotive industry. Business Strategy and the Environment, 2010, 19, 453-465.	8.5	6
104	Renewable rural electrification: Sustainability assessment of mini-hybrid off-grid technological systems in the African context. Renewable Energy, 2010, 35, 257-265.	<b>4.</b> 3	120
105	A South African research agenda to investigate the potential environmental, health and safety risks of nanotechnology. South African Journal of Science, 2010, 106, .	0.3	3
106	Global Warming Potential and Fossil-Energy Requirements of Biodiesel Production Scenarios in South Africa. Energy & Energy & 2010, 24, 2489-2499.	2.5	28
107	Learnable Lessons on Sustainability From the Provision of Electricity in South Africa. , 2010, , .		4
108	Life cycle inventories to assess value chains in the South African biofuels industry. Journal of Energy in Southern Africa, 2010, 21, 15-25.	0.5	9

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109	Strategic corporate environmental management within the South African automotive industry: motivations, benefits, hurdles. Corporate Social Responsibility and Environmental Management, 2009, 16, 310-323.	5.0	55
110	Sustainability appraisal of used vehicle trade policy options in sub-Saharan African countries. The Environmentalist, 2009, 29, 360-370.	0.7	1
111	LCM 2009â€"the global challenge of managing life cycles. International Journal of Life Cycle Assessment, 2009, 14, 379-380.	2.2	O
112	Systems analyses and the sustainable transfer of renewable energy technologies: A focus on remote areas of Africa. Renewable Energy, 2009, 34, 1774-1781.	4.3	34
113	The viability of the South African biofuels industrial strategy. International Journal of Environment and Pollution, 2009, 39, 74.	0.2	5
114	Development of a sustainability assessment framework for planning for sustainability for biofuel production at the policy, programme or project level. WIT Transactions on Ecology and the Environment, 2009, , .	0.0	1
115	DETERMINING THE MOST IMPORTANT FACTORS FOR SUSTAINABLE ENERGY TECHNOLOGY SELECTION IN AFRICA. South African Journal of Industrial Engineering, 2009, 20, .	0.2	6
116	Selection of renewable energy technologies in Africa: the case of efficient stoves in Malawi., 2009,,.		1
117	Towards a comprehensive Clean Development Mechanism (CDM) approach for biodiesel. WIT Transactions on Ecology and the Environment, 2009, , .	0.0	1
118	Towards a Southern Africa Development Community (SADC) model to assess financing options of renewable energy technologies. , 2009, , .		0
119	An industry perspective of the completeness and relevance of a social assessment framework for project and technology management in the manufacturing sector. Journal of Cleaner Production, 2008, 16, 253-262.	4.6	71
120	Towards modelling macro influencing factors to address South African energy challenges: A focus on electricity demand and climate change. , 2008, , .		1
121	Determining the most important factors for sustainable energy technology selection in Africa: Application of the focus group technique. , 2008, , .		11
122	Development of a water state index to assess the severity of impacts on and changes in natural water resources. Water Science and Technology, 2008, 58, 1595-1600.	1.2	1
123	Sustainable Development and Technology Management. Management of Technology, 2008, , 185-203.	0.1	2
124	Environmental impact assessment during project execution phases: towards a stage-gate project management model for the raw materials processing industry of the energy sector. Impact Assessment and Project Appraisal, 2007, 25, 111-122.	1.0	17
125	An appraisal of social aspects in project and technology life cycle management in the process industry. Management of Environmental Quality, 2007, 18, 413-426.	2.2	29
126	The transfer and commercialisation of technology from south africa to foreign markets in the financial services industry. , 2007, , .		0

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127	Application of the analytical hierarchy process to establish health care waste management systems that minimise infection risks in developing countries. European Journal of Operational Research, 2007, 181, 403-424.	3.5	106
128	CDM Projects under the Kyoto Protocol: A Methodology for Sustainability Assessment – Experiences from South Africa and Uruguay. Environment, Development and Sustainability, 2007, 9, 33-48.	2.7	19
129	Application of a Life Cycle Impact Assessment framework to evaluate and compare environmental performances with economic values of supplied coal products. Journal of Cleaner Production, 2006, 14, 1071-1084.	4.6	45
130	A project-based Mine Closure Model (MCM) for sustainable asset Life Cycle Management. Journal of Cleaner Production, 2006, 14, 1085-1095.	4.6	33
131	Small-scale medical waste incinerators – experiences and trials in South Africa. Waste Management, 2006, 26, 1229-1236.	3.7	19
132	Characterisation and Normalisation Factors for Life Cycle Impact Assessment Mined Abiotic Resources Categories in South Africa: The manufacturing of catalytic converter exhaust systems as a case study (10 pp). International Journal of Life Cycle Assessment, 2006, 11, 162-171.	2.2	23
133	Social Indicators for Sustainable Project and Technology Life Cycle Management in the Process Industry (13 pp + 4). International Journal of Life Cycle Assessment, 2006, 11, 3-15.	2.2	187
134	The Impact of Mineral Resource Depletion - In response to Steen BA (2006): Abiotic Resource Depletion: Different perceptions of the problem with mineral deposits. Int J LCA 11 (Special Issue 1) 49-54. International Journal of Life Cycle Assessment, 2006, 11, 361-362.	2.2	10
135	Selection of Sustainable Rural Agriculture Projects in South Africa: Case Studies in the LandCare Programme. Agroecology and Sustainable Food Systems, 2006, 28, 55-84.	0.9	24
136	The application of life cycle management in decision making for sustainable development at government and corporate level: the integration of project, asset and product life cycles. Progress in Industrial Ecology, 2005, 2, 223.	0.1	5
137	Assessing the sustainability performances of industries. Journal of Cleaner Production, 2005, 13, 373-385.	4.6	767
138	An environmental performance resource impact indicator for life cycle management in the manufacturing industry. Journal of Cleaner Production, 2005, 13, 557-565.	4.6	43
139	Sustainable Project Life Cycle Management: the need to integrate life cycles in the manufacturing sector. International Journal of Project Management, 2005, 23, 159-168.	2.7	247
140	Environmental and social impact considerations for sustainable project life cycle management in the process industry. Corporate Social Responsibility and Environmental Management, 2005, 12, 38-54.	5.0	89
141	Evaluating projects that are potentially eligible for Clean Development Mechanism (CDM) funding in the South African context: a case study to establish weighting values for sustainable development criteria. Environment and Development Economics, 2005, 10, 631-649.	1.3	24
142	Integrating LCIA and LCM. Management of Environmental Quality, 2005, 16, 130-142.	2.2	23
143	Asset life cycle management: towards improving physical asset performance in the process industry. International Journal of Operations and Production Management, 2005, 25, 566-579.	3.5	134
144	The LCIA midpoint-damage framework of the UNEP/SETAC life cycle initiative. International Journal of Life Cycle Assessment, 2004, 9, 394.	2.2	226

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145	A life cycle impact assessment procedure with resource groups as areas of protection. International Journal of Life Cycle Assessment, 2004, 9, 172-179.	2.2	39
146	Comparative evaluation of Life Cycle Impact assessment methods with a South African case study. International Journal of Life Cycle Assessment, 2003, 8, 27.	2.2	28
147	Establishing the Propensity for Dioxin Formation Using a Plume Temperature Model for Medical Waste Incinerator Emissions in Developing Countries. Journal of the Air and Waste Management Association, 2002, 52, 811-821.	0.9	11
148	Status of life cycle assessment and engineering research in South Africa. International Journal of Life Cycle Assessment, 2002, 7, 167-172.	2.2	24
149	Selection of sustainable rural agriculture projects in south Africa: case studies in the landcare programme. , 0, , .		0
150	Integrating Sustainability into Technology-Oriented Project Management. Impact of Meat Consumption on Health and Environmental Sustainability, 0, , 160-181.	0.4	0